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Qualifications and work methodology

Reference period 2018-19 financial year

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Overview

The Qualifications and Work publication presents detailed information on people's educational qualifications (including multiple and incomplete qualifications) and the relevance of completed qualifications to their current jobs. With data on the level and field of up to five qualifications, year of completion, cultural background, whether qualifications were attained in Australia, demographic characteristics, labour force participation and income, it provides a rich contextual background for understanding interplays between education and work.

How the data is collected

Scope

The scope of the survey was restricted to people aged 15 years and over who were usual residents of private dwellings and excludes:

- members of the Australian permanent defence forces
- certain diplomatic personnel of overseas governments, customarily excluded from Census and estimated resident population counts
- overseas residents in Australia
- members of non-Australian defence forces (and their dependants)
- persons living in non-private dwellings such as hotels, university residences, boarding schools, hospitals, nursing homes, homes for people with disabilities, and prisons
- persons resident in the Indigenous Community Strata (ICS).

The scope for Multipurpose Household Survey (MPHS) included households residing in urban, rural, remote and very remote parts of Australia, except the ICS.

Coverage

In the Labour Force Survey (LFS), rules are applied which aim to ensure that each person in coverage is associated with only one dwelling, and hence has only one chance of selection in the survey. See Labour Force, Australia (https://www.abs.gov.au/AUSSTATS/abs@.nsf/
Lookup/6202.0Explanatory%20Notes1Jul%202018?OpenDocument) (cat. no. 6202.0) for more detail.

Data collection

The survey is one of a number of small, self-contained topics on the MPHS.

Each month, one eighth of the dwellings in the LFS sample were rotated out of the survey and selected for the MPHS. After the LFS had been fully completed for each person in scope and coverage, a usual resident aged 15 years or over was selected at random (based on a computer algorithm) and asked the additional MPHS questions in a personal interview.

In the MPHS, if the randomly selected person was aged 15 to 17 years, permission was sought from a parent or guardian before conducting the interview. If permission was not given, the parent or guardian was asked the questions on behalf of the 15 to 17 year old (proxy interview).

Data were collected using Computer Assisted Interviewing (CAI), whereby responses were recorded directly onto an electronic questionnaire in a notebook computer, with interviews conducted either face-to-face or over the telephone. The majority of interviews were conducted over the telephone.

Sample size

After taking into account sample loss, the response rate for the 2018/19 survey was 71.8%. In total, information was collected from 28,719 fully responding persons. This includes 477 proxy interviews for people aged 15 to 17 years, where permission was not given by a parent or guardian for a personal interview.

How the data is processed

Weighting

Weighting is the process of adjusting results from a sample survey to infer results for the total 'in-scope' population. To do this, a 'weight' is allocated to each enumerated person. The weight is a value which indicates the number of persons in the population represented by the sample person.

The first step in calculating weights for each unit is to assign an initial weight, which is the inverse of the probability of being selected in the survey. For example, if the probability of a person being selected in the survey was 1 in 600, then the person would have an initial weight of 600 (that is, they represent 600 people).

Benchmarks

The initial weights were calibrated to align with independent estimates of the population of interest, referred to as 'benchmarks'. Weights calibrated against population benchmarks ensure that the survey estimates conform to the independently estimated distribution of the population rather than the distribution within the sample itself. Calibration to population benchmarks helps to compensate for over or under-enumeration of particular categories of persons/households which may occur due to either the random nature of sampling or non-response.

The survey was benchmarked to the Estimated Resident Population (ERP) living in private dwellings in each state and territory at December 2018. People living in Indigenous communities were excluded. These benchmarks are based on the 2016 Census.

While LFS benchmarks are revised every 5 years, to take into account the outcome of the 5-yearly rebasing of the ERP following the latest Census, the supplementary surveys and MPHS (from which the statistics in this publication are taken) are not. Small differences will therefore exist between the civilian population aged 15 years and over reflected in the LFS and other labour household surveys estimates, as well as over time. If comparisons are being made over time then proportions should be used rather than estimates of persons.

Estimation

Survey estimates of counts of persons are obtained by summing the weights of persons with the characteristic of interest.

Confidentiality

To minimise the risk of identifying individuals in aggregate statistics, a technique is used to randomly adjust cell values. This technique is called perturbation. Perturbation involves a small random adjustment of the statistics and is considered the most satisfactory technique for avoiding the release of identifiable statistics while maximising the range of information that can be released. These adjustments have a negligible impact on the underlying pattern of the statistics. After perturbation, a given published cell value will be consistent across all tables. However, adding up cell values to derive a total will not necessarily give the same result as published totals. The introduction of perturbation in publications ensures that these statistics are consistent with statistics released via services such as TableBuilder.

Reliability of estimates

All sample surveys are subject to error which can be broadly categorised as either sampling error or non-sampling error. For more information refer to Accuracy.

Classifications

Country of birth

Country of birth data are classified according to the <u>Standard Australian Classification of Countries (SACC), 2016 (https://www.abs.gov.au/AUSSTATS/abs@.nsf/Latestproducts/1269.0Main%20Features152016?</u>

<u>opendocument&tabname=Summary&prodno=1269.0&issue=2016&num=&view=)</u> (cat. no. 1269.0).

Geography

Australian geographic data are classified according to the <u>Australian Statistical Geography</u> Standard (ASGS): Volume 1 - Main Structure and Greater Capital City Statistical Areas, July 2016 (https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/ 1270.0.55.001~July%202016~Main%20Features~Statistical%20Area%20Level%201%20(SA1)~ 10013) (cat. no. 1270.0.55.001). Remoteness areas are classified according to the Australian Statistical Geography Standard (ASGS): Volume 5 - Remoteness Structure, July 2016 (https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/ D964E42C5DF5B6D4CA257B03000D7ECB?opendocument) (cat. no. 1270.0.55.005).

Industry

Industry data are classified according to the <u>Australian and New Zealand Standard Industrial Classification (ANZSIC), 2006 (https://www.abs.gov.au/ausstats/abs@.nsf/mf/1292.0)</u> (Revision 2.0) (cat. no. 1292.0).

Language

Language data are classified according to the <u>Australian Standard Classification of Languages (ASCL), 2011 (https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/C663C3F4F9BAA709CA257FF1001E68E8?opendocument) (cat. no. 1267.0).</u>

Occupation

Occupation data are classified according to the <u>ANZSCO – Australian and New Zealand</u> Standard Classification of Occupations, First Revision, Revision 1, 2009 (https://www.abs.gov.au/ausstats/abs@.nsf/PrimaryMainFeatures/1221.0?OpenDocument) (cat. no. 1221.0).

Socio-economic Indexes for Areas (SEIFA)

This survey uses the 2016 Socio-economic Indexes for Areas (SEIFA).

SEIFA is a suite of four summary measures that have been created from 2016 Census information. Each index summarises a different aspect of the socio-economic conditions of people living in an area. The indexes provide more general measures of socio-economic status than is given by measures such as income or unemployment alone.

For each index, every geographic area in Australia is given a SEIFA number which shows how disadvantaged that area is compared with other areas in Australia.

The index used in this publication is the Index of Relative Socio-economic Disadvantage, derived from Census variables related to disadvantage such as low income, low educational attainment, unemployment, jobs in relatively unskilled occupations and dwellings without motor vehicles.

SEIFA uses a broad definition of relative socio-economic disadvantage in terms of people's access to material and social resources, and their ability to participate in society. While SEIFA represents an average of all people living in an area, it does not represent the individual

situation of each person. Larger areas are more likely to have greater diversity of people and households.

For more detail, see the following:

- SEIFA Basics: Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), Australia, 2016 (https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/6CD4E5CE952FEDBFCA257B3B001AC3E5?opendocument) (cat. no. 2033.0.55.001)
- SEIFA 2016 Technical paper available from the Downloads tab: <u>Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), Australia, 2016 (https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/6CD4E5CE952FEDBFCA257B3B001AC3E5?opendocument)</u> (cat. no. 2033.0.55.001)

Key education concepts

Australian Standard Classification of Education (ASCED)

Education data are coded to the <u>Australian Standard Classification of Education (ASCED)</u>, <u>2001 (https://www.abs.gov.au/ausstats/abs@.nsf/mf/1272.0)</u> (cat. no. 1272.0). The ASCED is a national standard classification which can be applied to all sectors of the Australian education system including schools, vocational education and training and higher education. The ASCED comprises two classifications: Level of Education and Field of Education.

Level of Education is defined as a function of the quality and quantity of learning involved in an educational activity. There are nine broad levels, 15 narrow levels and 64 detailed levels. For definitions of these levels see the <u>Australian Standard Classification of Education</u>, 2001 (https://www.abs.gov.au/ausstats/abs@.nsf/mf/1272.0) (cat. no. 1272.0).

Field of Education is defined as the subject matter of an educational activity. Fields of education are related to each other through the similarity of subject matter, through the broad purpose for which the education is undertaken, and through the theoretical content which underpins the subject matter. There are 12 broad fields, 71 narrow fields and 356 detailed fields. For detailed definitions of these fields see the Australian Standard Classification of Education (ASCED), 2001 (https://www.abs.gov.au/ausstats/abs@.nsf/mf/1272.0) (cat. no. 1272.0).

Level of highest educational attainment

Level of highest educational attainment was derived from information on highest year of school completed and level of highest non-school qualification. The derivation process determines which of the 'non-school' or 'school' attainments will be regarded as the highest. Usually the higher ranking attainment is self-evident, but in some cases some secondary education is regarded, for the purposes of obtaining a single measure, as higher than some certificate level attainments.

The following decision table is used to determine which of the responses to questions on highest year of school completed (coded to ASCED Broad Level 6) and level of highest non-school qualification (coded to ASCED Broad Level 5) is regarded as the highest. It is emphasised that this table was designed for the purpose of obtaining a single value for level of highest educational attainment and is not intended to convey any other ordinality.

Decision table: Level of highest educational attainment

Level of highest non-school qualification									
Highest year of school completed	Cert IV	Cert III	Cert III & IV n.f.d.	Cert II	Cert I	Cert I & II n.f.d.	Cert n.f.d.	Inadequately described L.n.d.	Not Stated
Year 12	Cert IV	Cert III	Cert III & IV n.f.d.	Year 12	Year 12	Year 12	L.n.d.	L.n.d.	N.S.
Year 11	Cert IV	Cert III	Cert III & IV n.f.d.	Year 11	Year 11	Year 11	L.n.d.	L.n.d.	N.S.
Senior Sec. Education n.f.d	Cert IV	Cert III	Cert III & IV n.f.d.	Senior Sec. n.f.d.	Senior Sec. n.f.d.	Senior Sec. n.f.d.	L.n.d.	L.n.d.	N.S.
Year 10	Cert IV	Cert III	Cert III & IV n.f.d.	Year 10	Year 10	Year 10	L.n.d.	L.n.d.	N.S.
Year 9 and below	Cert IV	Cert III	Cert III & IV n.f.d.	Cert II	Cert I	Cert I & II n.f.d.	Cert n.f.d.	L.n.d.	N.S.
Sec. Education n.f.d	Cert IV	Cert III	Cert III & IV n.f.d.	L.n.d.	L.n.d.	L.n.d.	L.n.d.	L.n.d.	N.S.
Junior Sec. Education n.f.d	Cert IV	Cert III	Cert III & IV n.f.d.	L.n.d.	L.n.d.	L.n.d.	L.n.d.	L.n.d.	N.S.
Not stated	Cert IV	Cert III	Cert III & IV n.f.d.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
Never attended school	Cert IV	Cert III	Cert III & IV n.f.d.	Cert II	Cert I	Cert I & II n.f.d.	Cert n.f.d.	L.n.d.	N.S.

Cert = Certificate

L.n.d. = Level not determined

n.f.d. = not further defined

N.S. = Not Stated

Sec. = Secondary

The decision table is also used to rank the information provided in a survey about the qualifications and attainments of a single individual. It does not represent any basis for comparison between differing qualifications. For example, a person whose highest year of school completed was Year 12, and whose level of highest non-school qualification was a Certificate III, would have those responses crosschecked on the decision table and would as

a result have their level of highest educational attainment output as Certificate III. However, if the same person answered 'certificate' to the highest non-school qualification question, without any further detail, it would be crosschecked against Year 12 on the decision table as Level not determined. The decision table, therefore, does not necessarily imply that one qualification is 'higher' than the other. <u>Education Variables</u>, <u>June 2014 (https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/1246.0main+features24june%202014)</u> (cat. no. 1246.0).

Comparing the data

Comparability of Time Series

In 2010-11, the Learning and Work survey was conducted on half the MPHS sample. In 2015, the Qualifications and Work topic was run on the full MPHS sample resulting in approximately twice the sample from 2010-11.

In 2018/19 and 2010/11 the data was collected from July to June whereas in 2015 the enumeration period ran from January to December. All surveys included a 12 month continuous collection period.

There was a change to the way qualifications were asked in 2018/19. Selected respondents were asked whether they had any qualifications. In previous surveys they were asked to confirm qualification details collected from any responsible adult on behalf of the household. Due to this change, comparisons with previous surveys should be done with caution.

Comparability to monthly LFS Statistics

Since the survey is conducted as a supplement to the LFS, data items collected in the LFS are also available in this publication. However, there are some important differences between the two surveys. The LFS had a response rate of over 90% compared to the MPHS response rate of 71.8%. The scope of the Qualifications and Work Survey (Q&W) and the LFS also differ (refer to these sections above). Due to the differences between the samples, data from this survey and the LFS are weighted separately. Differences may therefore be found in the estimates for those data items collected in the LFS and published as part of Q&W.

Comparability with other ABS surveys

Some comparisons can be made with other selected education and training publications. Care should be taken when comparing data from different surveys due to the differences in scope, definitions and methodologies used. In the interpretation of the results of this survey, consideration should be given to the representativeness of the sample. This is

affected by the response rate (which is generally lower for surveys conducted as personal interview) and also the fact that the survey covers only people living in private dwellings.

Additionally, estimates from Q&W may differ from the estimates for the same or similar data items produced from other ABS collections for several reasons. For example, all sample surveys are subject to different sampling errors so users should take account of the relative standard errors (RSEs) on estimates where comparisons are made. Differences also exist in scope and/or coverage, reference periods reflecting seasonal variations, non-seasonal events that may have impacted on one period but not another, or because of underlying trends in the phenomena being measured.

Differences can occur as a result of using different collection methodologies. This is often evident in comparisons of similar data items reported from different ABS collections where, after taking account of definition and scope differences and sampling error, residual differences remain. These differences are often the result of the mode of the collections, such as whether data are collected by an interviewer or self-enumerated by the respondent and whether the data are collected from the person themselves or from a proxy respondent. Differences may also result from the context in which questions are asked, i.e. where in the interview the questions are asked and the nature of preceding questions. The impacts on data of different collection methodologies are difficult to quantify. As a result, every effort is made to minimise such differences.

Survey of Education and Work

The Survey of Education and Work (SEW) (cat. no. 6227.0) has some similarities with Q&W. Conducted annually, SEW provides a range of indicators about educational participation and attainment, and data on people's transition between education and work. Comparison of SEW and Q&W data should be undertaken with caution due to different collection methodologies, scope and sample size. SEW is based on a household interview with any responsible adult who responds on behalf of all persons aged 15-74 years in the household. Q&W is conducted as a personal interview with one randomly selected person, aged 15 years or over, in the household. As such, the Q&W survey has a smaller sample size.

Recent Migrants

Care should be taken when comparing with other migrant collections due to possible under-coverage. Coverage is always a greater challenge for recent migrants than longer-term migrants and Australian-born people, for reasons including: age, language and English proficiency, a propensity to live in secure apartment buildings or in temporary accommodation and increased difficultly in contact due to study and/or work commitments during peak contact periods.

The calibration to population benchmarks helps to compensate for over or underenumeration of particular categories of persons/households however country of birth and year of arrival are not used in this benchmarking process.

How the data is released

Datacubes/spreadsheets

Data Cubes containing all tables for this publication in Excel spreadsheet format are available in the <u>Data downloads (https://www.abs.gov.au/statistics/people/education/qualifications-and-work/2018-19#data-download)</u>. The spreadsheets present tables of estimates and proportions, and their corresponding relative standard errors (RSEs) and/or Margins of Error (MoEs).

As well as the statistics included in this and related publications, the ABS may be able to provide other relevant data on request. Subject to confidentiality and sampling variability constraints, tables can be tailored to individual requirements for a fee. A list of data items from this survey is available from the Downloads tab. All enquiries should be made to the National Information and Referral Service (https://www.abs.gov.au/websitedbs/d3310114.nsf/

<u>4a256353001af3ed4b2562bb00121564/56af0a60b87e8880ca256d8d00833fb8!</u>
<u>OpenDocument)</u> on 1300 135 070, or email client.services@abs.gov.au

TableBuilder

For users who wish to undertake more detailed analysis of the data, the survey microdata will be released through the TableBuilder product. Microdata can be used by approved users to produce customised tables and analysis from the survey data. Microdata products are designed to ensure the integrity of the data whilst maintaining the confidentiality of the respondents to the survey. More information can be found at https://www.abs.gov.au/websitedbs/D3310114.nsf/home/How+to+Apply+for+Microdata).

DataLab

Detailed microdata will be available on DataLab for approved users who are required to undertake interactive (real time) complex analysis of microdata in the secure ABS environment. For more details, refer to https://www.abs.gov.au/websitedbs/D3310114.nsf/home/CURF:+About+the+ABS+Data+Laboratory+(ABSDL)).

Accuracy

Reliability of the estimates

The estimates in this publication are based on information obtained from a sample survey. Any data collection may encounter factors, known as non-sampling error, which can impact on the reliability of the resulting statistics. In addition, the reliability of estimates based on sample surveys are also subject to sampling variability. That is, the estimates may differ from those that would have been produced had all persons in the population been included in the survey. This is known as sampling error.

Two types of error are possible in estimates based on a sample survey:

- non-sampling error
- sampling error

Read more

Non-sampling error

Non-sampling error is caused by factors other than those related to sample selection. It is any factor that results in the data values not accurately reflecting the true value of the population.

It can occur at any stage throughout the survey process. Examples include:

- selected people that do not respond (e.g. refusals, non-contact)
- questions being misunderstood
- responses being incorrectly recorded
- errors in coding or processing the survey data

Sampling error

Sampling error is the expected difference that can occur between the published estimates and the value that would have been produced if the whole population had been surveyed. Sampling error is the result of random variation and can be estimated using measures of variance in the data.

Standard error

One measure of sampling error is the standard error (SE). There are about two chances in three that an estimate will differ by less than one SE from the figure that would have been obtained if the whole population had been included. There are about 19 chances in 20 that an estimate will differ by less than two SEs.

Measures of error in this publication

This publication reports the relative standard error (RSE) for estimates of counts ('000) and the margin of error (MOE) for estimates of proportions (%).

Relative standard error

The relative standard error (RSE) is obtained by expressing the standard error as a percentage of the estimate.

$$RSE\% = \left(\frac{SE}{estimate}\right) \times 100$$

Only estimates with RSEs less than 25% are considered reliable for most purposes. Estimates with larger RSEs, between 25% and less than 50% have been included in the publication, but are flagged to indicate that they should be used with caution. Estimates with RSEs of 50% or more have also been flagged and are considered unreliable for most purposes. RSEs for these estimates are not published.

Margin of error

The Margin of Error (MOE) shows the largest possible distance (due to sampling error) that could exist between the estimate and what would have been produced had all people been included in the survey, at a given level of confidence. It is useful for understanding and comparing the accuracy of proportion estimates. Confidence levels can vary (e.g. typically 90%, 95% or 99%), but in this publication, all MOEs are provided for estimates at the 95% confidence level. At this level, there are 19 chances in 20 that the estimate will differ from the population value by less than the provided MOE.

The 95% confidence level MOE is obtained by multiplying the standard error by 1.96.

$$MOE = SE \times 1.96$$

The RSE can also be used to directly calculate a 95% MOE by:

$$MOE = \frac{RSE\% \times estimate \times 1.96}{100}$$

These can be converted to a 90% confidence level by multiplying the MOE by:

$$\frac{1.615}{1.96}$$

or to a 99% confidence level by multiplying the MOE by:

$$\frac{2.576}{1.96}$$

Depending on how the estimate is to be used, a MoE of greater than 10% may be

considered too large to inform decisions. For example, a proportion of 15% with a MoE of plus or minus 11% would mean the estimate could be anything from 4% to 26%. It is important to consider this range when using the estimates to make assertions about the population.

Confidence Intervals

The estimate combined with the MOE defines a range, known as a confidence interval. This range is likely to include the true population value with a given level of confidence. A confidence interval is calculated by taking the estimate plus or minus the MOE of that estimate. It is important to consider this range when using the estimates to make assertions about the population or to inform decisions. Because MOEs in this publication are provided at the 95% confidence level, a 95% confidence interval can be calculated around the estimate, as follows:

95\% Confidence Interval = (estimate
$$-MOE$$
, estimate $+MOE$)

Calculating measures of error

Proportions and percentages formed from the ratio of two estimates are also subject to sampling errors. The size of the error depends on the accuracy of both the numerator and the denominator. A formula to approximate the RSE of a proportion is given below. This formula is only valid when the numerator (x) is a subset of the denominator (y):

$$RSE\left(rac{x}{y}
ight)pprox\sqrt{[RSE(x)]^2-[RSE(y)]^2}$$

When calculating measures of error, it may be useful to convert RSE or MOE to SE. This allows the use of standard formulas involving the SE. The SE can be obtained from RSE or MOE using the following formulas:

$$SE(y) = rac{RSE(y) imes y}{100}$$

$$SE = \frac{MOE}{1.96}$$

Calculating differences

The difference between two survey estimates (counts or percentages) can also be calculated from published estimates. Such an estimate is also subject to sampling error. The sampling error of the difference between two estimates depends on their SEs and the relationship (correlation) between them. An approximate SE of the difference between two estimates (x-y) may be calculated by the following formula:

$$SE(x-y) pprox \sqrt{[SE(x)]^2 + [SE(y)]^2}$$

While this formula will only be exact for differences between separate and uncorrelated characteristics or sub populations, it provides a good approximation for the differences likely to be of interest in this publication.

Significance testing

When comparing estimates between surveys or between populations within a survey, it is useful to determined whether apparent differences are 'real' differences or simply the product of differences between the survey samples.

One way to examine this is to determine whether the difference between the estimates is statistically significant. This is done by calculating the standard error of the difference between two estimates (x and y) and using that to calculate the test statistic using the formula below.

$$\left(\frac{|x-y|}{SE(x-y)}\right)$$

where:

$$SE(y) = rac{RSE(y) imes y}{100}$$

If the value of this test statistic is greater than 1.96 we can say there is good evidence of a statistically significant difference at 95% confidence levels between the two populations with respect to that characteristic. Otherwise, it cannot be stated with confidence that there is a real difference between the populations.

Glossary

Show all

Adult migrant

In this survey, any in-scope person born overseas is deemed a migrant. The 'Adult migrants' refer to people who were aged 15–64 years at the time of the survey and were at least 15 years of age when they arrived in Australia. Consequently, tables exclude all migrants who were under 15 years of age on arrival (regardless of their age at the time of the survey).

Australian citizen

Being an Australian citizen formalises a person's membership of the Australian community.

It entitles a person to live permanently in Australia, hold an Australian passport and do such things as vote to elect Australia's governments, stand for parliament, work in the Public Service and serve in the armed forces. A person may acquire Australian citizenship in a number of ways, for example, by birth, adoption, descent, resumption or granting of Australian citizenship (naturalisation). Migrants no longer require a visa once citizenship is granted.

Australian Standard Classification of Education (ASCED)

The ASCED is a national standard classification which includes all sectors of the Australian education system: that is, schools, vocational education and training, and higher education. From 2001, ASCED replaced a number of classifications used in administrative and statistical systems, including the Australian Bureau of Statistics Classification of Qualifications (ABSCQ). The ASCED comprises two classifications: Level of education and Field of education. See Australian Standard Classification of Education, 2001 (https://www.abs.gov.au/ausstats/abs@.nsf/mf/1272.0) (cat. no. 1272.0).

Australian Statistical Geography Standard (ASGS)

The Australian Statistical Geography Standard (ASGS), brings together in one framework all of the regions which the Australian Bureau of Statistics (ABS) and many other organisations use to collect, release and analyse geographically classified statistics. See <u>Australian Statistical Geography Standard (ASGS): Volume 1 - Main Structure and Greater Capital City Statistical Areas, July 2016 (https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/1270.0.55.001~July%202016~Main%20Features~Overview~1) (cat. no. 1270.0.55.001).</u>

Capital city

Refers to Greater Capital City Statistical Areas (GCCSA) as defined by the ASGS. The GCCSAs represent the socio-economic extent of each of the eight State and Territory capital cities. The whole of the ACT is included in the GCCSA. See <u>Australian Statistical Geography</u>. Standard (ASGS): Volume 1 - Main Structure and Greater Capital City Statistical Areas, July 2016 (https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/1270.0.55.001~July%202016~Main%20Features~Overview~1) (cat. no. 1270.0.55.001)

Certificate n.f.d. (Certificate not further defined)

Survey responses are coded to Certificate not further defined (n.f.d.) when there is not enough information to code them to Certificate I, II, III or IV in the <u>Australian Standard Classification of Education</u>, 2001 (https://www.abs.gov.au/ausstats/abs@.nsf/mf/1272.0) (cat. no. 1272.0), Level of education classification.

Completed a qualification

A person having 'completed' a qualification means they have successfully passed all the required assessments or examinations to gain an educational qualification.

Country of birth

Country of birth has been classified according to the <u>Standard Australian Classification of Countries (SACC)</u>, <u>Second Edition (https://www.abs.gov.au/ausstats/abs@.nsf/mf/1269.0)</u> (cat. no. 1269.0). 'Born in Australia' refers to all persons born in Australia or any of its external territories'. 'Born overseas' refers to all persons not 'born in Australia', including those born at sea and persons whose country of birth is unknown.

Currently working in field of qualification

Indicates that an individual is using their qualification for the purpose of which it was originally intended. It implies the person is a good fit for the job, due to having specific skills and knowledge. This is most likely to occur in specialist fields, such as medicine, nursing and teaching.

Deciles

Deciles divide a distribution into ten equal groups. In the case of Socio-economic Indexes for Areas (SEIFA), the distribution of scores is divided into ten equal sized groups. The lowest scoring 10% of areas are given a decile number of 1, the second-lowest 10% of areas are given a decile number of 2 and so on, up to the highest 10% of areas which are given a decile number of 10.

Disadvantage

The ABS defines relative socio-economic advantage and disadvantage in terms of "people's access to material and social resources, and their ability to participate in society".

Education

Education data are classified according to the <u>Australian Standard Classification of Education (ASCED)</u>, 2001 (https://www.abs.gov.au/ausstats/abs@.nsf/mf/1272.0) (cat. no. 1272.0). The ASCED is a national standard classification which can be applied to all sectors of the Australian education system including schools, vocational education and training, and higher education. The ASCED comprises two classifications: Level of Education and Field of Education.

Educational institution

Any institution whose primary role is education. Included are schools, higher education establishments, colleges of technical and further education and public and private colleges.

Employed

Persons who, during the reference week:

- worked for one hour or more for pay, profit, commission or payment in kind in a job or business, or on a farm (comprising employees, employers and own account workers); or
- worked for one hour or more without pay in a family business or on a farm (i.e. contributing family workers); or
- were employees who had a job but were not at work and were:
 - away from work for less than four weeks up to the end of the reference week; or
 - away from work for more than four weeks up to the end of the reference week and received pay for some or all of the four week period to the end of the reference week; or
 - away from work as a standard work or shift arrangement; or
 - on strike or locked out; or
 - on workers' compensation and expected to return to their job; or
- were employers or own account workers who had a job, business or farm, but were not at work.

Employed full-time

Employed persons who usually worked 35 hours or more a week (in all jobs) and those who, although usually working less than 35 hours a week, worked 35 hours or more during the reference week.

Employed part-time

Employed persons who usually worked less than 35 hours a week (in all jobs) and either did so during the reference week, or were not at work in the reference week.

Engagement in employment or study

The term 'engagement' is used when assessing a persons level of participation in employment and education. People can be Fully engaged, Partially engaged, or Not engaged.

Equivalised household income

Equivalised household income is total household income adjusted by the application of an equivalence scale to facilitate comparisons of income levels between households of differing

size and composition. Equivalised total household income can be viewed as an indicator of the economic resources available to a standardised household.

For a lone person household it is equal to household income. For a household comprising more than one person, it is an indicator of the household income that would be needed by a lone person household to enjoy the same level of economic well-being.

Field of highest educational attainment

The subject matter of the educational activity for the highest achievement a person has attained in any area of formal study.

Field information inadequate

Field information inadequate includes responses which do not provide sufficient information to be coded to any field or where there is no field of education given.

First qualification

In this survey, the first qualification was based on the earliest year the non-school qualification was completed.

Where two or more non-school qualifications were completed in the same year, then the lowest qualification level is considered to be the first qualification. If they were all completed in the same year and at the same level, then the qualification reported last is the first qualification.

Fully engaged

People who were in either full-time work and/or study, or employed part-time combined with part-time study.

Greater Capital City Statistical Areas (GCCSA)

Represent the socio-economic area of each of the eight state and territory capital cities as defined in the <u>Australian Statistical Geography Standard (ASGS)</u>: Volume 1 - Main Structure and Greater Capital City Statistical Areas, July 2016 (https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/

1270.0.55.001~July%202016~Main%20Features~Overview~1). These boundaries are built from aggregations of whole Statistical Areas Level 4. GCCSA boundaries represent a broad socio-economic definition of each capital city. They contain not only the urban area of the capital city but also surrounding and non-urban areas where much of the population has strong links to the capital city (e.g. through commuting to work). Within each state and territory, the area not defined as being part of the greater capital city is represented by a

Rest of State region.

Higher education institution or organisation

An Australian institution providing higher education courses, eg. universities, colleges or advanced education; institutes of advanced education; institutes of higher education; institutes of tertiary education; agricultural colleges; and some institutes of technology, the equivalent institutions overseas.

Income

Income consists of all current receipts, that are received by the household or by individual members of the household, and which are available for, or intended to support, current consumption.

- wages and salaries and other receipts from employment (whether from an employer or own incorporated enterprise), including income provided as part of salary sacrificed and/ or salary package arrangements
- profit/loss from own unincorporated business (including partnerships)
- net investment income (interest, rent, dividends, royalties)
- government pensions and allowances
- private transfers (e.g. superannuation, workers' compensation, income from annuities, child support, and financial support received from family members not living in the same household)

Gross income is the sum of the income from all these sources before income tax, the Medicare levy and the Medicare levy surcharge are deducted.

Incomplete qualification

Refers to a non-school qualification that was started and partially undertaken but never completed. Incomplete qualifications excludes qualifications that are currently being studied.

Index of Disadvantage (IRSD)

The index of Disadvantage is a general socio-economic index that summarises attributes such as income, educational attainment, unemployment and occupation skill level. Unlike the other indexes, this index includes only measures of relative disadvantage. The index ranks areas on a continuum from most disadvantaged to least disadvantaged. A low score on the index (i.e. lowest quintile or decile) indicates a high proportion of relatively disadvantaged people in an area. Such areas include many households with low income, people with no qualifications and many people in low skill occupations. It should be noted

that it cannot be concluded that an area with a very high score has a large proportion of relatively advantaged ('well off') people, as there are no variables in the index to indicate this. It can only be concluded that such an area has a relatively low incidence of disadvantage.

Index of Advantage and Disadvantage (IRSAD)

The index of Advantage and Disadvantage summarises information about the economic and social conditions of people and households within an area, using attributes such as income, educational attainment, unemployment and occupation skill levels. The index includes both relative advantage and disadvantage measures. A low score indicates relatively greater disadvantage and a lack of advantage in general and a high score indicates a relative lack of disadvantage and greater advantage in general.

Index of Economic Resources (IER)

The index of Economic Resources ffocuses on the financial aspects of relative socioeconomic advantage and disadvantage, by summarising variables related to income and wealth. This index excludes education and occupation variables because they are not direct measures of economic resources. A low score indicates a relative lack of access to economic resources in general and a high score indicates relatively greater access to economic resources in general

Index of Education and Occupation (IEO)

The index of Education and Occupation is designed to reflect the educational and occupational level of communities. The education variables in this index show either the level of qualification achieved or whether further education is being undertaken. The occupation variables classify the workforce into the major groups and skill level of the Australian and New Zealand Standard Classification of Occupations (ANZSCO) and the unemployed. This index does not include any income variables. A low score indicates relatively lower education and occupation status of people in the area in general and a high score indicates relatively higher education and occupation status of people in the area in general.

For further information about the indexes, see <u>Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), 2016 (https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/2033.0.55.001~2016~Main%20Features~SOCIO-ECONOMIC%20INDEXES%20FOR%20AREAS%20(SEIFA)%202016~1) (cat. no. 2033.0.55.001).</u>

Industry

Industry data is classified according to the <u>Australian and New Zealand Standard Industrial</u>

Classification (ANZSIC), 2006 (https://www.abs.gov.au/ausstats/abs@.nsf/mf/1292.0) (cat. no. 1292.0).

International Standard Classification of Education (ISCED)

ISCED (http://uis.unesco.org/en/topic/international-standard-classification-education-isced) was developed by the United Nations Educational Scientific and Cultural Organisation (UNESCO) to facilitate comparisons of education statistics and indicators within and between countries. It was originally endorsed at the General Conference of UNESCO in 1978. In 2011, the second major revision of this classification was officially adopted by the UNESCO General Conference. The product of extensive international and regional consultations among education and statistical experts, ISCED 2011 takes into account significant changes in education systems worldwide since the last ISCED revision in 1997.

Labour force status

A classification of the civilian population aged 15 years and over, including employed, unemployed or not in the labour force, as defined in <u>Labour Statistics: Concepts, Sources</u> and <u>Methods, Feb 2018 (https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/6102.0.55.001~Feb%202018~Main%20Features~Overview%20of%20Labour%20Statistics~1) (cat. no. 6102.0.55.001). The definitions conform closely to the international standard definitions adopted by the International Conferences of Labour Statisticians.</u>

Level not determined

The level not determined includes qualifications with missing or inadequately described responses.

Level of highest educational attainment

Level of highest educational attainment identifies the highest achievement a person has attained in any area of formal study. It is not a measurement of the relative importance of different fields of study but a ranking of qualifications and other educational attainments regardless of the particular area of study or the type of institution in which the study was undertaken. For more information regarding how Level of highest educational attainment is derived see Explanatory Notes, Classifications, Decision Table: Level of highest educational attainment. It is categorised according to the Australian Standard Classification of Education, 2001 (https://www.abs.gov.au/ausstats/abs@.nsf/mf/1272.0) (cat. no. 1272.0) Level of education classification. Level of education is also classified according to the International Standard Classification of Education (ISCED), 2011.

Level of highest non-school qualification

A person's level of highest non-school qualification is the highest qualification a person has attained in any area of formal study other than school study. It is categorised according to the <u>Australian Standard Classification of Education</u>, 2001 (https://www.abs.gov.au/ausstats/abs@.nsf/mf/1272.0) (cat. no. 1272.0) Level of education classification.

In this survey, a respondent's non-school qualifications (up to five qualifications) were ranked by their ASCED code (level of education) to determine which was their highest non-school qualification. Where a respondent had more than one non-school qualification at the same level, then the qualification reported first was ranked higher.

Note: Not further defined levels were ranked lower than the defined levels eg. Certificate n.f.d. was ranked lower than the defined Certificate levels IV to Certificate level I. Responses that did not provide sufficient information to be coded to any level, or there was no level information provided were ranked last.

Long term health condition

A condition that has lasted or is likely to last six months or more, excluding pregnancy, and cancer where the respondent received a false positive test result. Respondents were specifically asked whether they had any of the following conditions:

- arthritis or osteoporosis
- asthma
- cancer
- diabetes
- a heart or circulatory condition
- a mental health condition, including depression or anxiety
- a long term injury
- any other long term health condition.

Main field of education

The main subject matter of the study undertaken by a person in completing an education activity. Where a qualification covered multiple fields (e.g. a double degree) the 'main' field is the one considered most important. It is categorised according to the <u>Australian Standard Classification of Education</u>, 2001 (https://www.abs.gov.au/ausstats/abs@.nsf/mf/1272.0) (cat. no. 1272.0) Field of education classification. Main field of education is also classified according to the International Standard Classification of Education (ISCED), 2011.

Migrant

Migrant refers to any person not born within Australia or the Australian external territories.

Most recent qualification

In this survey, the most recent qualification was based on the most recent year that the non-school qualification was completed.

Where two or more non-school qualifications were completed in the same year, then the higher qualification level is considered to be the most recent. If they were all completed in the same year and were at the same level, then the qualification reported first is considered to be the most recent qualification.

Most relevant qualification

In this survey, the most relevant qualification to their main/current job or business was sourced from employed persons.

Where an employed person had completed one non-school qualification, the qualification was considered to be most relevant if the person:

- was working in the same field as their qualification main field
- was employed but not working in the same field but reported that the qualification was highly relevant, relevant or somewhat relevant to their main/current job or business.

Where the employed person had completed more than one non-school qualification, the most 'most relevant' qualifications was:

- the qualification nominated by the respondent as being 'most relevant' to their main/ current job or business. Qualifications nominated as most relevant but reported elsewhere as 'not at all relevant' were not included in the 'most relevant' category
- ascertained even if the respondent indicated 'none of the above', but provided other information to indicate otherwise.

Non-school qualification

Non-school qualifications are awarded for educational attainments other than those of preprimary, primary or secondary education. They include qualifications at the Postgraduate Degree level, Master Degree level, Graduate Diploma and Graduate Certificate level, Bachelor Degree level, Advanced Diploma and Diploma level, and Certificates I, II, III and IV levels. Non-school qualifications may be attained concurrently with school qualifications.

In this survey respondents were asked to provide details of up to five non-school qualifications they may have completed, starting with their highest non-school qualification and followed by their second/third/fourth/fifth highest non-school qualifications completed.

Not engaged

Persons who were not employed and not studying.

Not in labour force

Persons who were not in the categories 'employed' or 'unemployed'.

Not working in field of qualification

Indicates that an individual is not using their qualification for the purpose for which it was originally intended.

Number of qualifications

Refers to number of non-school qualifications completed. Detailed information was collected on only up to five of the highest non-school qualifications.

Occupation

Occupation data is classified according to the <u>Australian Standard Classification of Occupations</u>, First Edition, Revision 1 (https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/E8A05691E35F4376CA257B9500138A52?opendocument) (cat. no. 1220.0).

Partially engaged

People who were employed part-time and not studying, or in part-time study and not employed.

Part-time status of work

Part-time work is less than 35 hours per week. The number of hours can be calculated based on the amount usually worked or the number actually worked during the week before interview.

Personal income

This relates to gross personal income.

Proficiency in spoken English

A self-assessment by persons who speak a language other than English at home, of whether they speak English very well, well, not well or not at all.

Qualification

Formal certification, issued by a relevant approved body, in recognition that a person has

achieved an appropriate level of learning outcomes or competencies relevant to identified individual, professional, industry or community needs. Statements of attainment awarded for partial completion of a course of study at a particular level are excluded.

Qualification(s) completed before and/or after arrival

Qualification(s) completed by a migrant before and/or after arrival in Australia are based on the five highest completed qualifications reported. These may have been completed before arrival, after arrival or a combination of both.

Qualification(s) completed before arrival

Out of the five highest qualifications reported, the qualification(s) completed by a migrant in any year prior to the year of their arrival in Australia. Also see 'Qualification(s) completed after arrival'.

Qualification(s) completed after arrival

Out of the five highest qualifications reported, the qualification(s) completed by a migrant in the same year as their arrival in Australia as well as any qualification(s) completed in subsequent years.

Quintiles

The distribution of income into five equal sized groups are referred to as quintiles.

Reference week

The week preceding the week in which the interview was conducted.

Relative standard error

A measure of the extent to which an estimate might have varied by chance because only a sample of dwellings was surveyed, and not the entire in-scope population. Relative standard error (RSE) is obtained by expressing the standard error as a percentage of the estimate. For more details refer to the Technical Note.

Relevance of qualification to current job

Relevance of qualification to current job is specific to people who are not working in the field of their non-school qualification. It refers to how useful the skills and knowledge gained by having completed the qualifications are to performing the specific tasks required as part of their job.

Remoteness

The Australian Statistical Geography Standard (ASGS) was used to define remoteness. Remoteness Areas divide Australia into 5 classes of remoteness on the basis of a measure of relative access to services. The Remoteness Structure is described in detain in the Australian Statistical Geography Standard (ASGS): Volume 5 - Remoteness Structure, July. 2016 (https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/D964E42C5DF5B6D4CA257B03000D7ECB?opendocument) (cat. no. 1270.0.55.005).

Rest of state/territory

Comprises the remainder of each state/territory not included in a Capital City. See

Australian Statistical Geography Standard (ASGS): Volume 1 - Main Structure and Greater

Capital City Statistical Areas, July 2016 (https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/

1270.0.55.001~July%202016~Main%20Features~Statistical%20Area%20Level%201%20(SA1)~10013) (cat. no. 1270.0.55.001).

Self-assessed health

A person's impression of their own health against a five point scale from excellent through to poor.

Socio-Economic Indexes for Areas (SEIFA)

Socio-Economic Indexes for Areas (SEIFA) is an ABS product that ranks areas in Australia according to relative socio-economic advantage and disadvantage. The indexes are based on information from the five-yearly Census of Population and Housing.

The four indexes used in this publication were created from Census 2016 data. Each index is a summary of a different subset of Census variables and focuses on a different aspect of socio-economic advantage and disadvantage. Each index ranks geographic areas across Australia in terms of their relative socio-economic advantage and disadvantage. It is therefore likely that the same area will have different ranking on each index. See indexes above for more information.

Statistical significance

Differences between population estimates are said to be statistically significant when it can be stated with 95% confidence that there is a real difference between the populations (see the Technical Note for more information).

Underemployed

Employed people aged 15 years and over who want, and are available for, more hours of

work than they currently have. They comprise:

- People employed part-time who want to work more hours and are available to start work with more hours, either in the reference week or in the four weeks subsequent to the survey; or
- People employed full-time who worked part-time hours in the reference week for economic reasons (such as being stood down or insufficient work being available). It is assumed that these people wanted to work full-time in the reference week and would have been available to do so.

Unemployed

People aged 15 years and over who were not employed during the reference week, and:

- had actively looked for full-time or part-time work at any time in the four weeks up to the end of the reference week and were available for work in the reference week; or
- were waiting to start a new job within four weeks from the end of the reference week and could have started in the reference week if the job had been available then.

Abbreviations

Australian Bureau of Statistics	ABS
Australian Bureau of Statistics Classification of Qualifications	ABSCQ
Australian and New Zealand Standard Classification of Occupations	ANZSCO
Australian and New Zealand Standard Industrial Classification	ANZSIC
Australian Standard Classification of Education	ASCED
Australian Statistical Geography Standard	ASGS
Australian Standard Classification of Languages	ASCL
Greater Capital City Statistical Areas	GCCSA
International Standard Classification of Education	ISCED
Labour Force Survey	LFS
Margin of Error	MOE
not further defined	n.f.d.
Qualifications and Work	Q&W
relative standard error	RSE
Standard Australian Classification of Countries	SACC
standard error	SE
Socio-economic Indexes for Areas	SEIFA
Survey of Education and Work	SEW
TableBuilder	TB